January 26, 1956

Dear Kim:

Of course I will be delighted to go over your ms. when it is ready.

I wouldn't want to send you down the garden path on a trivial type of research, but I think it would be worth while screening a couple of dozen commonplace antiseptics for their mechanism of action. The ignorance on mechanisms, even sites, is appalling, despite the tremeddous amount of empirical data on disinfection, and I am not at all happy about any of the mooted interpretations of the exponential decays curves(<u>with time</u>) that are found or approximated with many disinfectants.

There may be some practical value in this too -- it is not too fanciful that there will be some correlation between general nucleotoxicity and tumor-therapy, and some quarters (which I could readily name if you wanted to turn over a routinized program) would be delighted to have a simple screening (or pre-screening) method along these lines.

Anyhow, why not give a try to two groups of compounds:(cf CSH 16:429), some more obvious mutagens, including such things as acetaldehyde (as a natural product of Neurospora), and such commonplaces as phenols, iodine, heavy metals (Hg), basic dyes and some antibiotics (actidione and nystatin). Even a routine survey, published in the right place, might give a new direction to a lot of now wasted effort in the study of disinfection.

Are you going to stop at finding only $1-e^{-1}$ of the genotype?

I am surprised, almost astonished that Bowers has not written to you; I hope I have not misjudged the whole situation.

Some recent astonishments here: we have fihally worked out a technique for screening compatibility status of colonies by replica plating. It proves to be fairly simple to isolated new Hfr stocks from uv'd F+. But these seem to be of various types. The original Hfr (Cavalli) resembled type F+ qualitatively in segregation ratios, i.e., Gal and Mal eliminated; B_1-M and Lac-TL etc, not. However, Hayes' (and = Jacob-Wollman's) Hfr is already different, showing a very high Gal segregation ratio, which must mean that it is not eliminated there. Some of the new Hfr's show still different types of behavior. We don't have this well sorted out yet, as to the possible role of F agent, genetic background, and structural rearrangement, but it is at least obvious why J-W and we (and Skaar-Garen) could not agree on experimental details. Since the elimination pattern is thus seemingly under genetic control (but fixed in any given cross) this may be an important lead to understanding why,when and how it happens.

Yours,